SECTION 4 – OPERATING, RECLAMATION, AND WATER MANAGEMENT PLANS FOR PILOT SCALE TESTWORK

4.a General Ore Processing Overview

The Proposed DMM Centennial mine small scale mineral processing test program will consist of limited open pit development of the Lage Pit (approximately 36,500 tons), a supplemental ore stockpile (ultimately 5,000 tons), a small surface waste dump (approximately 10,000 tons), for ultimate backfill of the "mining blocks" or slot cuts, a covered (roofed) pad and bermed process area to house the Thompson Mill, a tailings storage facility for spent ore, a maintenance building, and an office trailer complex which could also house up to 6 workers. An estimated 75-100 tons of ore would be mined and processed daily during the initial test program. About 36,500 tons would be ultimately processed over the Phase 1 proposed 275-365 day test program. A second test program may be conducted, depending on the efficiency of the initial Thomson mill and gold extraction process.

Mining will be limited, and occur on the Homestake, Mountaineer, Homestake Extension, and Mountaineer Extension consolidated patented lode claims. Mining blocks (4) would be approximately 100 x 100 ft. in area, and mined sequentially over the life of the small mineral processing facility. This would involve ore processing needs of no more than 36,500 tons per year, or 120,000 tons during the life of the testing project. DMM has submitted a Reclamation Plan to the Idaho Department of Lands, as required by Title 47, Chapter 15 Idaho Code. This includes cost estimates for reclamation, and describes an appropriate financial assurance program, and a recontouring and revegetation program.

The ore to be mined is well-fractured oxidized rock containing disseminated gold and silver. The fractured condition has caused exposure and additional oxidation. As a result, the ore contains little remaining reactive sulfides or soluble heavy metals. The leach solutions are expected to remain relatively free of dissolved components other than gold, silver and the cyanide leach chemicals. As previously discussed, DMM will conduct TCLP analyses for a representative number of tailings samples during the initial operation. These results will be submitted to the IDEQ for review, and to be included in the permitting reporting record.

The ore would be mined using traditional small scale open pit ("slot cut") mining techniques. The small pit will initially be prepared for mining by ripping with a bulldozer. Drilling and blasting of the overburden and waste rock is not currently planned, as the initial ore supply is close to the surface. Ore and waste will be loaded into a dump truck using a front-end loader or similar equipment, and hauled from the pit to the processing facility stockpile, or the waste rock storage site via the main haul road. Topsoil-like material will be stockpiled near the waste rock storage area for future reclamation use. A water truck will be employed as necessary to control dust.

The location of the ore on the hillside is generally above the local terrain. The initial ore contains little remaining reactive sulfide ores, making it very amenable to the cyanide milling process. Process solutions for the test program are expected to remain relatively free of dissolved components other than gold, some silver and the leach solutions. Data will be collected to optimize the effectiveness of the beneficiation process during the test program.

The Thompson Mill requires an initial ore throughput size faction of 3/8 inch ore material. The proposed portable crushing circuit is based on a single jaw crusher, and a fine crushing circuit consisting of one short head cone crusher operated in closed circuit with a double deck screen. The modular plant will operate 16 hours/day for up to 365 days during Year 1 of operations. The system is designed to produce 80% finer than 0.375 inch product for the Thompson Mill grinding circuit.

The generalized grinding circuit flowsheet is shown in Figure 3. It employs two grinding units, each measuring 14 x 18 inches. The grinding circuit is powered by two electric motors, which are housed internal to the self-contained, trailer mounted mobile plant.

The pulverizing capacity of the Thompson Mill is generated by suspending the unit on a set of chrome-vanadium steel alloy springs, and rotating a central shaft at each end. This results in a continuously active vibratory motion; the grinding charge is continuously active throughout creating an "impact rate" of 3,500 times per minute. Each mill is followed by a hydrocyclone. The purpose of the hydrocyclones is to reduce the liquor flow to the mill.

The discharge from the grinding units reports to the hydrocyclone on top of the cyanide dissolution retention tower. Cyanide solution is re-circulated from the tower to the grinding units. Discharge pulp is retained in the cyanide retention tower. Retention time is typically 2 to 4 hours, due to the very finely ground ore and the addition of oxygen. The discharge from the retention tower then reports to an enclosed filter belt where the pregnant cyanide solution and tailings are separated.

The pregnant cyanide solution is then circulated through carbon columns (also totally contained) packed with activated charcoal. Gold-loaded carbon is collected and sent to the alcohol stripping liquor tank. Alkaline hot alcohol stripping occurs within the closed circuit system. Gold dore is recovered by electrowinning at the site.

Prior to slurry placement of the processed tailings in the lined tailings storage impoundment, spent ore would be treated to neutralize the cyanide, either by alkaline chlorination or by using sodium hypochlorite dosing. A rinsing procedure would take place in enclosed tankage. Neutralized ore would be placed in the lined storage facility in two foot lifts, in order to promote additional aeration, solar radiation and treatment. The ore would be considered successfully "treated" or neutralized in the tailings impoundment when the residual solute from the leached ore is less than 0.2 mg/l WAD cyanide. Waste characteristics will be analyzed in the initial phase of the pilot treatment

process using approved EPA procedures. A test program is described earlier in this document (see Section 3e).

DMM intends to operate a laboratory and assay lab at the site (see Figures 4 and 4a for siting). This facility will have the capability to analyze for free cyanide as an immediate indicator for WAD concentrations at the site. Other onsite capabilities will include pH, conductivity, and turbidity. An EPA-approved laboratory will be used for all compliance related analytical testing. At this time, DMM uses Analytical Laboratories, Inc. in Boise, Idaho.

DMM is currently evaluating potential re-use applications for the treated spent ore material involving compost manufacturing, in order to take advantage of available nutrients and carbon and nitrate nitrogen sources. This could ultimately enhance reclamation and revegetation opportunities at the minesite or provide for other commercial applications. Stockpiling of other topsoil-like material from the mining operation is also planned for use in final reclamation.

4 h Pro-Active Mine Reclamation Plan Strategy

The existing minesite is sparsely vegetated. The surface has been disturbed as a result of previous mining activities (see Appendix 3, Aerial Photographs). Limited topsoil exists on the ridges and steeper slopes. The shallower slopes and bottoms of the gullies and ravines contain topsoil in areas a foot or more thick.

During the test program, DMM has committed to reclaiming 5 acres of previously disturbed ground in the mine area not needed for future full-scale mining and/or processing activities. The area proposed for concurrent reclamation will be mutually agreed upon by DMM and the Idaho Department of Lands (IDL). It will be targeted and assigned a reclamation priority and schedule during the review of this application. Reclamation activities would commence and run concurrent with mining and construction of the small mineral processing facility.

Vegetation will be stripped from the area of disturbance. It will be chipped and stockpiled for use in future revegetation programs. It will be placed near the topsoil stockpiles. Topsoil that is found during the construction and operation of the processing facility will be stripped and transported to a designated topsoil stockpile site, where it can be saved for this concurrent reclamation program. Surface water diversions designed to minimize sheetflow from the mine and topsoil stockpile areas will be installed, as described later in this section.

Initially, the small scale mine will be developed as a series of "slot cut-type" mining benches. The total land disturbance area is less than 5 acres. Runoff from the undisturbed area will be diverted away from the new mine site(s). It will be diverted via diversion contour drains with gentle slopes (between 2-3%), to minimize scour velocity and the potential for sheet runoff.

Ultimately, the mine slot cuts will be backfilled and regraded to approximate natural contours, topsoil and chipped revegetation will be applied as available. The previously disturbed mine area and/or other disturbed area(s) selected for concurrent reclamation will be seeded with an appropriate U.S. Forest Service approved seed mix to facilitate concurrent reclamation.

When the DMM small scale mineral processing program activities are completed and at the cessation of all mining activities, the haul road and waste rock storage site will also be reclaimed, per the requirements of Chapter 15, Title 47 of Idaho Code (Reclamation Plan required). The company has submitted a reclamation plan to be submitted to the Idaho Department of Lands. The goals of the plan are to:

- Minimize hazards to the public, livestock, and wildlife that may use the site in future years.
- Prevent degradation of adjacent surface water and ground water.
- Minimize visual impacts that could occur as a result of surface mining activities

As currently envisioned, the new pilot plant haul road would be ripped to loosen compacted soil. The road will be cross-ditched at regular intervals, and a 6-12 inch bed of topsoil-like material including chipped vegetation removed from the primary area of disturbance ("reclamation material") will be applied to the road surface. This would be followed by reseeding,

The proposed reclamation of the temporary waste rock storage site located south-southwest of the old Lage pit area will involve reducing the angle of repose to a 3:1 slope. The dump will be recontoured using a bulldozer. After recontouring, a 6-12 inch mantle of "reclamation material" will be applied, and the site will be revegetated using a USFS-approved seed mix..

The Thompson Mill is totally self-contained and portable. The trailers to be used for the office, and the temporary living quarters are also moveable. These would be taken by trailer from the site at the cessation of mining. The surface of the containment foundation area for the mill (less than two acres) will be broken up and buried in the mine slot cuts inside the Lage Pit area provided additional mining is not planned. If a full-scale mine plan is activated, the opportunity to expand these facilities modularly will be considered. Otherwise, these compacted areas will be ripped with a bulldozer; topsoil will be applied as available. This will be followed by revegetation using USFS- approved seed mixtures.

Reclamation of the initial tailings storage facility, including a demonstration that the encapsulated tailings have been neutralized, will be under the authority of the Idaho Department of Health and Welfare, Division of Environmental Quality (IDEQ). Previous testwork shows the material can be effectively neutralized by treatment using hydrogen peroxide or alkaline chlorination.

At closure, the pilot tailings storage facility will be dosed with dry lime. The HDPE liner will be cut, the sides folded over the top of the tailings in the pond, and welded together over the top of the tailings in the storage facility. The facility will then be capped by pushing approximately two to three feet of cover over the top of the encapsulated tailings. Most of this material will come from the impoundment berm (balanced cut to fill design concept). Additional ground material would then be applied in order to produce a final positive drainage gradient for revegetation using an approved seed mix. All final site drainage would be routed around the reclaimed tailings impoundment at closure, to maintain long-term integrity of the closed facility. The site would also be located by GPS and recorded, such that future potential regrading activities would not threaten the physical integrity of the encapsulated material by puncturing. A spent ore monitoring program is presented earlier in this document.

Previously in 1990, the following seed mix was recommended for the site:

- Secar bluebunch wheatgrass @ 3 lbs/acre
- Ephraim crested wheatgrass @ 2 lbs/acre
- Greener immediate wheatgrass at 3 lbs/acre

This mixture would be reviewed with IDL and the USFS, and the appropriate mix would be utilized.

4.c Water Management Plan

The previous 1990 Cyanidation Permit issued for the full-scale Centennial Mine project included a detailed water management plan and water balance. The cyanide processing facility proposed at that time was an "open air" conventional heap leach facility. It required a solution flow rate of 160 gpm, with new ore to the pad estimated at 30,000 tons per month. The facility was designed to accommodate the 100-year 24-hour storm event (2.8 inches), the necessary quantity or volume of process water, plus the head drain-down within the engineered pond system. In total, over 150 acres of new mining disturbance was contemplated for the 1990 full-scale mining operation.

No seasonal closure is planned for the DMM small scale operation. The small scale processing facility test programs are expected to be operated in sequence in the event more than one test program is conducted. However, an emergency temporary closure plan is outlined later in Section 7, in the event unforeseen natural or financial conditions would require short-term cessation of mining and/or processing at the site. Contingency water management planning is also described later in Section 5 of this document.

The current proposal by DMM would affect less than 10 total acres of new land disturbance, including the access and haul roads, mine area(s), waste rock storage site, and processing facility area. Water use requirements are estimated at less than 25 gpm for the pilot treatment facility. About 5 acres of pre-existing mining disturbance would also be reclaimed concurrently, as part of this proposal. This would keep the total area of new mining disturbance at less than 5 acres.

The overall water management strategy for the DMM project will focus on best management practices (BMP's) including:

- Directing site drainage and runoff away from the plant site, using engineered contour drains, silt fences, and sediment retention berms and infiltration basins, as appropriate.

- Housing the self-contained mill facility under a roofed area to limit precipitation "input" to the overall water balance.

- Maintaining at least 2 feet of freeboard in the tailings impoundment facility during operations, in addition to accommodating the established design precipitation event within the pond.

The detailed engineering plans and specifications show general locations where diversion terraces, silt fences, and contour drains will be located in order to limit erosion and runoff at the site will be shown in the final site plan and stamped drawings. These BMP locations are general at this time, and will be reassessed once the construction activities are completed, and several storm events have occurred. This will serve to optimize their efficiencies.

This approach is required, as the facility is considered temporary and an overall development goal is to limit necessary surface disturbance during this phase of the project. It is understood by DMM that any future applications involving a full-scale project would require submittal of new detailed plans and specifications certified by a registered professional engineer, in accordance with Section 39-118A, Idaho Code and additional review by IDEQ.

SECTION 5 – SPILL CONTINGENCY & EMERGENCY RELEASE PLANNING

DMM has taken special steps in the planning and design of the proposed Centennial mine small scale processing facility application to limit environmental risk associated with potential unplanned discharges or spill events. This discussion outlines contingency procedures which would be implemented by the company in the event either of these unplanned situations were to occur.

5.a Spill Prevention and Transportation Plan

In earlier Section 2.d Chemical Use, all reagents to be used on the project are listed. They are divided into major and minor constituents. Minor constituents have limited use on site an/or present low hazard to workers and the environment. Material Data Safety Sheets (MSDS) will be available for all on-site reagents and chemicals. All major constituents will have a spill response and cleanup strategy clearly specified. These materials include sodium cyanide, mercury, hydrochloric acid, sodium hydroxide, and hydrogen peroxide. MSDS follow later in this section for: sodium cyanide, sodium hypochlorite, calcium oxide, ethanol, hydrochloric and nitric acids.

DMM will also implement a Transportation Plan and Spill Response strategy, as part of this cyanidation permit. The objectives of the plan are:

1. Reduce the potential for accidental spills
2. Provide information to properly respond to a spill
3. Define responsibilities and notification procedures
4. Minimize or eliminate environmental impacts and health hazards

DMM will ensure that all transporters of fuel or hazardous materials are familiar with the contents of this plan. DMM will stipulate that shippers comply with all current rules governing the transportation of hazardous materials and petroleum products and have an emergency spill response plan in effect, as part of their supply contracts. Transport vehicles will be inspected for leakage entering and leaving the mine. Precautions will be taken during material transfer to prevent spillage or accidental ignition.

Spill response and clean-up is a responsibility of the shipper. However, DMM has agreed to assist the County Fire department ad local Emergency Response Committee in responding to spills of Project materials in Elmore County. DMM will have an ERC that is trained in spill containment. Neutralization, clean-up, and first aid techniques.

The following are some of the measures which apply to transport of oil/petroleum products and hazardous materials:

- Safety inspections of all transport vehicles before travel to the mine
- Fuel shipments will be in authorized supply trucks

- Hazardous liquids will be transported in containers meeting DOT specifications
- All transport of fuel and hazardous materials shall occur in daylight hours
- Trip delivery logs, spill plans shall be available upon request by IDEQ
- Maximum speed is 30 miles per hour
- Warning and information signs shall be placed along access routes

A minimum inventory of spill response supplies will be kept at the site. This inventory shall include: rolls, sheets, and sweeps (oil absorbents), first aid supplies; protective rubber boots, eyewear and jackets; shovels, axes, and fire extinguishers; Plug-n-Dike; posts and hay bales. General spill response actions will be:

- Safeguard life and property
- Notify the proper authorities
- Begin containment and cleanup
- Follow-up reporting

5.b Potential Accidental Spill Response Strategy

For the purposes of this application, a "spill event" means any discharge of deleterious material or oil into waters of the State of Idaho. Chemical spills could involve sodium cyanide, sodium hypochlorite, hydrogen peroxide, or other deleterious chemicals used by DMM at the minesite. Oil or fuel spills may also require emergency response. A major and mandatory spill event is described as a spill of sodium cyanide and/or other "deleterious material" in quantities which threaten human or aquatic life of livestock. A sodium cyanide spill is a discharge of cyanide bearing wastes to the environmental (land or water), which exceeds 10 mg/l free cyanide. A diesel oil "spill" is defined as a discharge exceeding 55 gallons.

The following discharge response strategy is outlined by DMM and will apply to all its employees and suppliers:

- A spill of any possibly deleterious material requires immediate and judicious action. A detailed copy of this Discharge Response Strategy will be part of the employees pre hire orientation.

- All employees will be trained under current Mine Safety & Health Administration (MSHA) requirements. New employees will receive site and job specific training covering procedures for counteracting spills of possible deleterious agents which will be used at the project. All employees will receive annual refresher training which will cover spill response strategies and procedures.

- This plan outlines procedures to be followed in the event of an accident or spill related to the handling of deleterious materials. The intent of the Response

Strategy for specific chemicals is to identify proper first aid procedures to be used in case of emergency, identify potential health hazards (fire, toxic gases, etc.) and provide a procedure to be used in dealing with the spill. Employees will be taught that actual field conditions must be taken into account when dealing with a spill. Conditions may require additional measures or changes in the procedures outlined here.

- The general procedures to be taken in the event of a spill are as follows:

  - ✓ Safeguard life and property.
  - ✓ Notify immediate supervisor; if spill occurs in route to the mine, contact appropriate law agency.
  - ✓ The Supervisor must notify the Project Manager or his designated representative on the site.
  - ✓ The Project Manager or his representative shall notify appropriate governmental agencies.
  - ✓ First priority is to contain the spill.
  - ✓ Fill out Standard Spill Report Form

- In the event of an accidental spill or leak of sodium cyanide, the following steps are to be taken:

  - ✓ Personal safety
    - Maintain personal safety.
    - Do not breathe dust, mist, or HCN (hydrogen cyanide) gas.
    - Avoid contact with eyes, skin or clothing.
    - Use self-contained breathing apparatus if necessary.
    - Use rubber gloves.
  - ✓ First aid and security
    - Remove injured or exposed persons from immediate spill area.
    - Administer first aid.
    - Secure, flag or block off 50 feet in all directions.
    - Evacuate area.

- Symptoms of cyanide poisoning

  - ✓ Reddened eyes
  - ✓ Irritated throat
  - ✓ Palpitations, difficult breathing
  - ✓ Numbness
  - ✓ Nausea, headache
  - ✓ Weakness in arms or legs
  - ✓ Collapse, convulsions

- First aid procedures

  - ✓ Move victim to fresh air.
  - ✓ If fully conscious, give oxygen.
  - ✓ If unconscious, or not fully conscious, give amyl nitrite and oxygen immediately.
  - ✓ If not breathing, give amyl nitrate and oxygen immediately.
  - ✓ Remove contaminated clothing and wash skin.
  - ✓ Lay victim down and keep warm, watch for 1-2 hours.
  - ✓ If swallowed and conscious, induce vomiting and give amyl nitrate and oxygen.
  - ✓ If swallowed, give victim 2 glasses of 1% sodium thiosulfate or plain water.
  - ✓ Transport to hospital or emergency medical facility.

- Fire or Explosion

  - ✓ Containers may explode in the heat of a fire.
  - ✓ Move containers away from fires if possible.
  - ✓ If containers are opened or burned, water may be used to put out the fire; this will cause cyanide runoff (NaCN dissolves in water).
  - ✓ Contain any runoff (dikes) and detoxify with calcium hypochlorite.
  - ✓ Do not use CO_2 (carbon dioxide) to put out fire; CO_2 reacts with cyanide to produce HCN gases if moisture is present.
  - ✓ For small fires use Halon, water spray, standard or dry chemical.

- Notify immediate supervisor or the shift foreman

  - ✓ Supervisors report directly and without delay to the Project Manager.
  - ✓ In the event that the Project Manager is not at the site, the Manager's designated representative shall have full, complete, and unlimited authority to respond to the spill.
  - ✓ It shall be the Project Manager's or his/her designated representative responsibility to immediately respond to the incident, to take any additional corrective action that is deemed necessary, and to notify all appropriate governmental agencies of the spill.

- Contain or stop spill or leak

  - ✓ Enter spill site from upwind, use HCN detector if available.
  - ✓ Ventilate closed spaces before entering.

- ✓ Do not touch spilled material, stop leak if possible but do so without risk.
- ✓ Sweep up and shovel cyanide into a covered container or plastic bag for later disposal.
- ✓ If raining, covering the spill will reduce the solution of sodium and reduce runoff.
- ✓ DO NOT put water directly on leak or spilled cyanide as poisonous HCN gases will be released.
- ✓ After cleanup, flush spill area with a dilute solution of sodium or calcium hypochlorite (household bleach).
- ✓ Place or build dikes completely surrounding any liquid spills.
- ✓ The contaminated material will be excavated to the extent practical and places within the tailings facility.

- In the event of an emergency, DMM protocol requires official communications and statements with the media, outside organizations and individuals to be handled by the Project Manager or Emergency Response Commander, or those appointed by him.

- In the event of an accident, spill or leak, of hydrogen peroxide 30% the following steps are to be followed:

  - ✓ Personal Safety
    - Maintain personal safety.
    - Avoid contact with eyes, skin and clothing.
    - Use self-contained breathing apparatus.
    - Remove injured or exposed persons from immediate spill area.
    - Administer first aid immediately.
    - Evacuate area as soon as possible.
  - ✓ Characteristics and hazards of hydrogen peroxide:
    - It is a clear, colorless liquid with a slightly pungent odor.
    - Strong oxidant coming in contact with other material, may cause fire.
    - Inhalation of vapors may cause severe irritation of the respiratory system.
    - Contact with skin or eyes may cause severe irritation or burns.
  - ✓ First aid procedures
    - Move victim to fresh air.
    - Call a physician.
    - If swallowed, do not induce vomiting.
    - If conscious, give large amounts of water.
    - If not breathing, give artificial respiration.

- ✓ Fire or Explosion
  - Strong oxidant coming in contact with other material may cause fire (i.e. peroxide).
  - Move containers away from fire if possible.
  - Use water spray for extinguishing media.

- In the event of an accident, spill or leak, of petroleum products (gasoline, diesel, oil), the following steps are to be followed

  - ✓ Personal safety
    - Maintain personal safety.
    - Avoid sources of ignition.
    - Avoid contact with eyes, skin and clothing.
    - Use self-contained breathing apparatus and protective fire fighter's clothing.
    - Remove injured or exposed persons from immediate spill area as soon as possible.
    - Administer first aid once clear of spill area.
  - ✓ Characteristics and hazards of these chemicals:
    - May be poisonous if inhaled or absorbed through skin.
    - Vapors may cause dizziness or suffocation.
    - Contact may irritate or burn skin and eyes.
    - Flammable/combustible material may be ignited by heat, sparks, or flame.
  - ✓ First aid procedures
    - Move victim to fresh air.
    - If not breathing, give artificial respiration.
    - If breathing is difficult, give oxygen.
    - Remove and isolate contaminated clothing and shoes immediately.
    - In case of contact with material, immediately flush skin or eyes with running water for at least 15 minutes.
    - Keep victim quiet and maintain normal body temperature.
    - Effects may be delayed; keep victim under observation.

  - ✓ Fire or explosion
    - Withdraw IMMEDIATELY in case of rising sound from venting safety device or any discoloration of fuel/ oil tanks due to fire.
    - Move all combustible materials away from fire.
    - Cool containers that are exposed to fire with water.
    - Water may be ineffective in extinguishing fires.

- For small fires use dry chemical, CO_2, Halon or standard foam.
- Build dikes to contain runoff.

DMM will have a designated emergency response commander (ERC) who will be trained to standards prescribed by the Mine Safety and Health Administration. All employees will have training in spill response in the event the ERC is not onsite. Reporting procedures depend on the severity of the spill but may include other company personnel, IDEQ, State of Idaho Communication Center, USFS and other individual state and federal agencies.

A Spill Response Strategy is required by the State of Idaho to be a part of the Ore Processing by Cyanidation Permit (this document). This spill response strategy outlines measures to be in place to prevent spills of reagents and other materials used in the ore processing facilities. It also describes techniques to be employed to clean up any accidental spills.

SECTION 6 – SURFACE WATER/GROUND WATER QUALITY MONITORING

DMM will commit to establishing four surface water sampling sites in the Wood Creek drainage (northern area) and Blacks Creek drainage (southern area). The sites will be located upgradient and downgradient from the proposed pilot test facilities and activities. Samples will be collected in the winter and early spring periods (frequency = 2X) during periods when streamflows are available. These sites will be reviewed and agreed to in the field by the company and IDEQ officials. Standard sampling protocols, and water quality parameters, detection limits and other analytical and reporting needs will be determined and agreed to by the company and IDEQ, prior to initiation of mining activities

Proposed surface water monitoring constituents are listed below. This represents a reduced list of parameters, based on the generally good water quality exhibited by historic water quality monitoring at the mine area location (samples collected in 1989 and 1990). These data will be compared to 2004 and 2005 sampling described earlier, and planned to be conducted by DMM as part of this cyanidation application. This sampling will address future baseline surface water quality conditions in the Wood Creek and Blacks Creek drainages, and historic mine drainage.

Proposed Surface Water Monitoring Constituents

Sodium Hydroxide Preserved Samples	Sulfuric Acid Preserved Samples
Total Cyanide	Nitrate
Weak Acid Dissociable Cyanide	
Free Cyanide (onsite)	

Nitric-Acid Preserved Samples	Non-Preserved Samples
Arsenic	pH (onsite)
Cadmium	Specific Conductance (onsite)
Copper	Chloride
Iron	Sulfate
Manganese	Turbidity (onsite)
Silver	Alkalinity

Metals are measured for dissolved metal content

All water quality analyses will be conducted using Standard Methods, 16th Edition, as approved by EPA. Cyanide analyses will be conducted using approved colorimetric procedures (335.3 EPA). Detection limits will be determined using approved EPA procedures.

As described earlier, the frequency of monitoring will be tied to the hydrograph and spring runoff. At this time, one (1) winter sampling event and one (1) spring event are planned, with the spring event just after peak runoff. A late spring season base flow condition (late June, early July) monitoring event is also planned in 2005, to compare these conditions with the 1989 sampling event.

It is important to note that the 1989 baseline surface water quality monitoring showed no unusual trends. pH measurements showed good water quality (range of 6.89 to 8.14). Total suspended solids and turbidity were highest in the spring, consistent with higher streamflows. Weak acid cyanide concentrations were less than 0.005 mg/l (the detection limit). Arsenic, iron, cadmium, mercury, copper, and selium levels were all also low.

DMM will comply with all conditions of the small-scale cyanidation permit. The company will allow IDEQ entry and access to the site, as required under Section 39-111, Idaho Code.

Once the DMM facility has been constructed, monitoring of the ground water well will occur on a monthly basis the first full year following start-up. The monitoring will include most of the parameters shown in the previous table for surface water.

After the first year of operation, DMM will meet with IDEQ (and other agencies as required), and review sampling results, parameters, and frequency. Modifications to the plan will be made, as appropriate, including a quarterly schedule going forward.

Water level measurements will be taken with an electronic well probe. Measurements will be recorded from the top of the PVC (or metal) casing. Reading will be recorded in feet and tenths of feet on standard field log sheets.

During this monitoring program, field measurements will include temperature, pH and electrical conductivity. Turbidity will not be measured.

Water samples will be collected by air-lifting, pumping or bailer. At least two casing volumes would be evacuated prior to collecting the sample.

Samples will be collected and preserved and delivered to an EPA-approved laboratory for analysis. Results will be submitted to IDEQ within 20 days of receipt of results. Compliance "triggers" will also be established in the final permit whereby immediate contact of IDEQ by phone is required.

Water quality data will be maintained on a computer database. This allows for easy retrieval of the data, in addition to statistical evaluation of trends and parameters of interest.

On an annual basis the operational monitoring results will be summarized and reported to IDEQ and other appropriate agencies. DMM will retain all records and results of

operational monitoring activities for a minimum of three years. This period will be extended if conditions warrant. Ground water monitoring data will be compiled by month of collection and maintained by DMM and reported annually as described above unless anomalous results are detected.

In the event of an accidental spill situation, surface and ground water monitoring programs may be increased in terms of frequency and parameters, depending on the severity of the spill. A corrective action and monitoring plan would be developed by DMM and IDEQ to respond to such a situation. The corrective action plan would involve the following:

- description of background concentrations and data used to establish these values;
- volumes of waste, flow rates, and levels of contamination resulting from the spill;
- methods for monitoring and sampling analysis;
- concentration limits for cleanup (what constitutes "cleaned up");
- detailed description of corrective actions to be taken to achieve compliance;
- proposed schedule for cleanup;
- environmental monitoring plan (surface water, ground water, other); and
- responsibilities for sign off after cleanup.

DMM would be responsible for preparing written progress reports to be submitted to the responsible IDEQ (or other agency) official, which describe and verify the effectiveness of the corrective action program. These reports would be submitted within 15 days after implementation of the Corrective Action Plan, and every 15 days thereafter. DMM would continue corrective action until the compliance period is over, or the spill is no longer considered a threat to human life or health or fish or wildlife. This will include disposal or decontamination of clean-up equipment and all deleterious wastes and residues.

Finally, the DMM monitoring plan provides for the following procedures to apply to IDEQ inspections:

Pre-Inspection Preparation: Ensure effectiveness use of inspection resources.

- Establish purpose and scope of inspection.
- Review background information and EPA records, including permit and permittee compliance file.
- Contact appropriate staff personnel responsible for the permittee; compliance personnel, pretreatment coordinator, etc.
- Develop plan for inspection.
- Prepare documents and equipment.
- Coordinate schedule with laboratory, if samples are to be collected.
- Coordinate schedule with other appropriate regulatory authorities.

- Contact party responsible for sample transportation, for packing/shipping requirements.

Entry: Establish legal entry to facility

- Present official credentials.
- Mange denial of entry if necessary.

Opening Conference: Orient facility officials to inspection plan.

- Discuss inspection objectives and scope.
- Establish working relationship with facility officials.

Facility Inspection: Determine compliance with permit conditions; collect evidence of violations

- Conduct visual inspection of facility.
- Review facility records.
- Inspect monitoring equipment and operations.
- Collect samples.
- Review laboratory records for QA/QC.
- Document inspection activities.

Closing Conference: Conclude inspection

- Collect missing or additional information.
- Clarify questions with facility officials.
- Prepare necessary receipts.
- Review inspection findings and inform officials of follow-up procedures.
- Issue deficiency notice, if appropriate.

Inspection Record: Organize inspection findings into a useful, objective evidence package.

- Complete NPDES Compliance Inspection Report Form.
- Prepare narrative report, checklists, and documentary information as appropriate.

This advance procedure outline would be reviewed and agreed to by IDEQ and DMM, in order to pre-establish a formal process for site inspections, and to facilitate the process, and be included in the final permit.

SECTION 7 – SEASONAL CLOSURE STRATEGY

A seasonal closure strategy could be required, based on weather conditions, mechanical issues, and/or a decision by the operator to prematurely shut down the operation. However, no seasonal shutdown is currently planned by DMM. Further the following seasonal closure strategy will be maintained

- At no time will the facility be left unattended while the facility is in operation or temporary closure.
- No discharges are authorized from the facility containment system.
- Beginning in late fall, minimum fresh water addition will be made in order to maintain minimum pond volume, consistent with stable operations.
- The procedure for sudden unexpected shutdown and planned shutdown are identical:
    - ✓ The tailings facility is designed to contain all solution inflow, plus the unexpected storm, plus a 2 ft. freeboard.
    - ✓ Prior to planned shutdown, or as soon as possible after shutdown, all solution in the system will be pumped to the tailings facility.
    - ✓ Following completion of active leaching (processing), all spent ore will be washed and neutralized (must meet 0.2 mg/l free cyanide concentration threshold).
    - ✓ Sufficient synthetic cover or liner for the tailings pond will be stored at the site, in order to limit precipitation "inflow" during extended non-operating periods.
    - ✓ Adequate quantities of hydrogen peroxide and/or hypochlorite sufficient to neutralize all will be stored at the facility.
    - ✓ The tailings facility liner will be routinely inspected to ensure total containment integrity.
    - ✓ The system of PVC distribution pipes will be routinely inspected for leaks (both process fluids and fuel).
    - ✓ Adequate sorbents and oil spill cleanup materials and equipment will be maintained at the site (booms, sorbent, berming material, fire fighting equipment).

SECTION 8 – FINANCIAL ASSURANCE

Section 650 of IDAPA 58.01.13 Rules for Ore Processing by Cyanidation requires that financial assurance be required for permanent closure of all facilities permitted under these rules. DMM understands that the financial assurance sum of $25,000 will be required for the Centennial small mineral processing facility. It is also understood that this amount will be reviewed by IDEQ on an annual basis. DMM will submit to IDEQ in writing on or before December 1st each year, a report describing the number of untreated processed ore and the projected number of tons leached with cyanide for the succeeding calendar year. In the event there is a material change in the tons of ore leached, DMM will submit written notification to IDEQ and adjust the financial assurance amount accordingly.

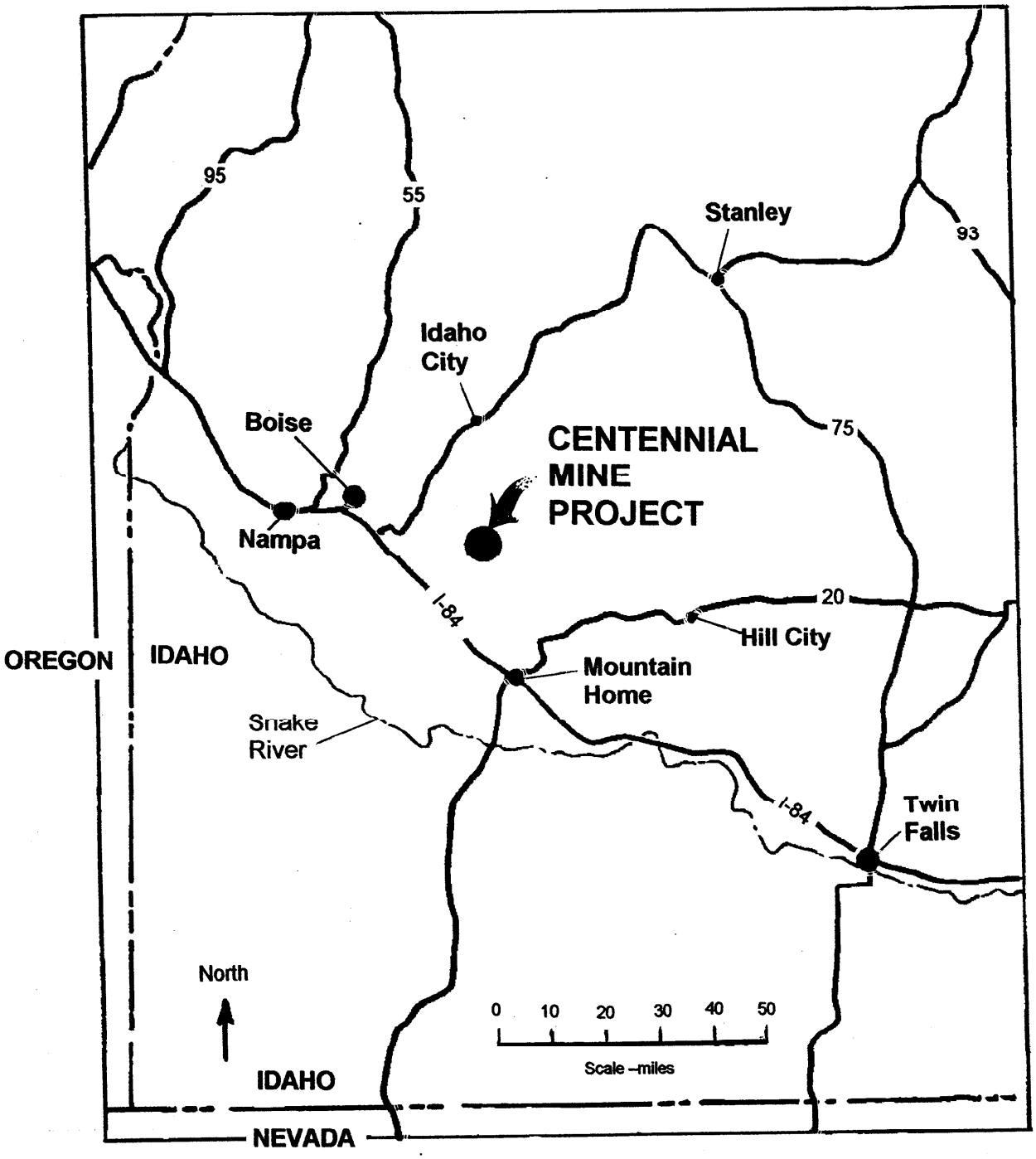

Figure 1 PROJECT LOCATION MAP
CENTENNIAL MINE·ELMORE COUNTY, IDAHO